

NYMPHALIDÆ OF THE ANTILLES (LEPIDOPTERA,
RHOPALOCERA)

BY WILLIAM P. COMSTOCK

COLOBURA DIRCE LINNÆUS AND ANTILLEAN SUBSPECIES

Colobura Billberg.

Colobura Billberg (1820) 79. *Gynæcia* Doubleday (1850) 248,
pl. 29, fig. 1. *Colobura* Aurivillius (1882) 90.

Genotype: *Papilio dirce* Linnæus, 1758.

Both *Colobura* and *Gynæcia* have the single species *dirce* as genotype. *Najas* Hübner (1807), as originally published, applied only to *themis* Hübner, a species which is not congeneric with *dirce*, although Hübner later included *dirce* in the genus *Najas*. Hemming (1934: 90).

The description of *Papilio dirce* Linnæus (1758: 477) has the note: "M. L. U.," meaning in the Museum Ludovicæ Ulricæ and the habitat "Calidis regionibus." Clerck (1764: pl. 36, fig. 3) figured the species (under the name of the synonym *bates*) from the Museum Ludovicæ Ulricæ collection, thus determining the Linnæan name. Aurivillius (1882: 90) mentions the type which presumably still exists. This is the butterfly which flies generally throughout South and Central America. Its continental occurrence was recognized by the earlier authors but the first reference to it in the Antilles was by Doubleday (1850: 248).

It must be borne in mind that this species has a very complex underside pattern which is subject to variation in any one locality as is well shown by long series from Colombia, Ecuador and Peru. At the northern end of the continental range, the Mexican population varies slightly from that farther south in having the dark lines on the underside slightly heavier in some individuals. This is a step toward the marked changes that occur in the various Antillean populations which differ as a group in having definitely heavier underside markings. The types are all in the collection of The American Museum of Natural History, except as otherwise noted.

Colobura dirce clementi, new subspecies.

SIZE AND SHAPE: the male has a forewing from 33 to 37 mm. in length with a nearly triangular shape, the outer margin being very slightly convex from the apex to Cu_1 . The hindwing is well rounded at the apex and prolonged between Cu_2 and 2A to form a broad, blunt lobe. In shape the males do not differ from continental males of *dirce* but the specimens average slightly larger.

GROUND-COLOR: this is black-brown on the upperside but nearly black in the apical half of the forewing. The color is a little deeper than in continental *dirce*. The underside ground-color is cream to yellow but much obscured by the pattern. There are traces of a pinkish tone in some of the hindwing areas which are normally cream in *dirce*.

MARKINGS: there is on the upperside of the forewing a lemon-yellow, oblique, irregular band varying in width from 4 to 6 mm., which meets the costa near the center and extends toward the tornus but does not quite reach the margin. The subapical yellow spot near the costa, present in *dirce*, is usually absent. In the anal lobe of the hindwing there are two joined black spots centered with a few blue scales. The underside of the forewing has the oblique band of the upperside repeated in cream-white. The apical area beyond the band is heavily but irregularly barred with dark brown, the bars merging together in blotches to make this area very heavily marked. In the central bar there are two, in some specimens three, black spots centered with a few blue scales. The wing area basad of the band is also heavily marked but the barred pattern is clearly retained and not suffused. In these respects Cuban specimens are much more intensely marked than continental *dirce*. The hindwing is also heavily barred but not suffused. Paralleling the outer margin there are three brown lines standing out more sharply on the yellow ground than in *dirce*. Basad of these there is a strongly defined, wedge-shaped, brown area which contains three subocellate spots diminishing in size from the costa. These spots are black, blue centered, and the largest and uppermost is tinged basad with maroon. The whole wing pattern is much more intense than is usual in *dirce*.

Types all from Cuba: Holotype, male, Santiago de Cuba, July, 1934. Paratypes: 3 ♂, Santiago de Cuba, July, 1934; 2 ♂, Sierra Maestra, July, 1934; 2 ♂, Habana, July, 1934 and 1935. These specimens were presented to the Museum by Mr. Frederic E. Church of New York. They were collected by H. Frère Clément for whom this new subspecies is named because of his great interest in Cuban Lepidoptera.

In the collection of the Museum of Comparative Zoology, Cambridge, Mass., there are the following paratypes: 2 ♂, Havana, July, 1935; ♂, Rangel, Pina del Rio, July 15, 1935; ♂, Cuchillo de Guayamas, Oriente, July 22, 1936.

The following four paratypes are in the collection of Dr. Charles T. Ramsden, in Santiago de Cuba: Santa Maria de Loreto, elevation 2,000 feet, June 1, 1908; Central "Romelie," east of Guantánamo City, in the plain, July 8, 1908; "Sierra de Canasta," west of Guantánamo City, elevation 300 feet, November 19, 1914; Bayate, Guantánamo, 20 to 30 miles N. W. of Guantánamo City, September, 1920.

Colobura dirce avinoffi, new subspecies.

SIZE AND SHAPE: the length of forewing in males is from 30 to 35 mm. and in females from 33 to 35 mm. The shape of the wings in males is the same as in *dirce* and *clementi*. In females the outer margin of the forewing is more evenly rounded from the apex to the tornus and is not slightly restricted below Cu_1 as in males, a sexual character true of all subspecies.

GROUND-COLOR: on the upperside this is slightly paler than *dirce* and distinctly paler than *clementi* in the males. The females are likewise paler than *dirce*. The underside shows a great distinction in ground-color for in the Jamaican population the coloring is pale lilac while in other subspecies it is cream or yellowish white. This is evident in the apical and basal areas of the forewing and over the entire hindwing except the submarginal yellow band which is thus more emphasized. Superficially the underside has a smoky appearance more noticeable in some specimens than in others with the females tending to be paler.

MARKINGS: on the upperside the marking is like *dirce* with the yellow costal spot present, not absent as it usually is in *clementi*. On the underside the dark brown markings are a little heavier than in *dirce* and much less pronounced than in *clementi*. The black, blue-centered spots of the central apical brown bar are slightly more evident than in *clementi* and in the hindwing the suboecellate spots show more blue sealing.

Types all from Jamaica: Holotype, male, Bath, St. Thomas, April 3, 1931; Allotype, female, Reading, St. James, January, 1939. Paratypes: 3 ♂, Bath, St. Thomas, April 3-4, 1931; 1 ♂, Constant Spring, St. Andrews, January 24, 1920; 1 ♀, Reading, St. James, January, 1939.

The following paratypes are in the collection of the Carnegie Museum, Pittsburgh, Pa.: 1 ♂, 1 ♀, Bath, St. Thomas, August 2, 3, 1931; 1 ♂, John Crow Hill, St. Thomas, July 3, 1937; 1 ♂, Pass or Gap Dist., Cuna Cuna Trail, St. Thomas, July 5, 1937.

The following paratypes are in the collection of the Museum of Comparative Zoology, Cambridge, Mass.: Baron Hill, near Jackson Town, 1,200 feet, 3 ♂, August; ♀, September.

The following paratypes are in the collection of Mr. Frederic E. Church, New York, N. Y.: 3 ♂, Reading, St. James, December 22, 30, 1938; January 20, 1939; ♀, Montego Bay, January 3, 1939.

A description and figures of this Jamaican subspecies appeared unnamed in Sloane (1725, 2: 218, pl. 239, figs. 3, 4); a reference not cited by Linnæus.

This subspecies is dedicated to Dr. A. Avinoff because of his extensive study of the butterflies of Jamaica.

***Colobura dirce wolcotti*, new subspecies.**

SIZE AND SHAPE: the length of forewing in males is from 33.5 to 35.6 mm. and in the females 35.6 to 37.7 mm. The wing shape of both sexes respectively is the same as *dirce*.

GROUND-COLOR: on the upperside this is brown and on the underside cream with yellow areas like *dirce*.

MARKINGS: on the upperside, the subapical yellow spot is absent as in *clementi*, thus differing from *dirce*. The underside of the forewing has heavier brown markings in the apical and basal areas than *dirce* but the apical markings are not suffused as in *clementi*. The hindwing is also heavily marked as in *clementi* with pinkish tones replacing some of the cream areas of *dirce*. The blue spots of the central bar of the forewing are obsolete but the subocellate spots of the hindwing are about as in *clementi*. It is distinguished from *avinoffi* by the lack of the pale lilac coloring.

Types: Holotype, female, Mayaguez, Puerto Rico, July 24-29, 1914. Paratypes: 1 ♂, Consumo, between Mayaguez and Las Marias, Puerto Rico, March 7, 1935; 1 ♂, 1 ♀, Fond Parisien, Haiti, February 19-20, 1933.

The following are in the collection of Cornell University, Ithaca, N. Y.: allotype, male, Lares, Puerto Rico, December, 1930; paratype, ♂, Largo dos Bocas, Puerto Rico, March 10, 1940.

The following paratypes are in the collection of the Museum of Comparative Zoology, Cambridge, Mass.: 5 ♂, 1 ♀, Cap Haitien, Haiti; ♂, Port au Prince, Haiti, October 9.

This subspecies is named for Dr. George N. Wolcott, chief of the entomological staff of the University of Puerto Rico, who has made so many valuable contributions to the entomological literature of that island.

The subspecies *walcotti*, the most remote geographically, appears the least differentiated from *dirce* of the continent. I have been unable to find any records of the capture of *dirce* in the Lesser Antilles but it occurs in Trinidad with the same facies as specimens from the Guianas.

EUNICA TATILA (HERRICH-SCHÄFFER) AND EUNICA TATILA
TATILISTA KAYE

Cybeldis tatila Herrich-Schäffer (1853) 54, pl. 17, figs. 69-72.

“Am. mer.”

Eunica tatila Herrich-Schäffer (1864) 162.

Eunica cærulea Godman and Salvin (1877) 64. Guatemala.

Eunica tatila and *cærulea* Godman and Salvin (1883) 1: 229, pl. 23, fig. 14.

Eunica tatila and *cærulea*, Seitz (1915) 484.

Herrich-Schäffer described *tatila* by the publication of four figures appearing in the second group of plates of his work which were issued in 1853. The text referring to *tatila* (54, dated April, 1858) consists of the line: “*tatila*. H-S. Exot. II. f. 69-72.—Am. mer.” The obvious interpretation of the locality is Central America.

In 1864 Herrich-Schäffer published his paper on Cuban butterflies which were sent to him by Gundlach. Writing of *tatila* he says: “Herr Gundlach received this as *maria* from H. Verreaux.” This introduces a name which seems to be *nomen nudum* for I can find no other mention of it. Herrich-Schäffer’s use of it is synonymous. He also mentions three variations in the underside pattern but apparently determined all Cuban specimens as *tatila*. He most certainly did not change the type locality of *tatila* to Cuba.

Godman and Salvin in 1877 described *Eunica cærulea* from one male from Guatemala, differentiating this specimen from “*E. tatila*—ex. Haiti.” Later (1883) in the *Biologia* they made a correction; recognized *tatila* and made their *cærulea* a synonym. They include in their localities for *tatila*, Mexico, Guatemala, Honduras, Colombia, Haiti and Cuba, but for the last they refer to the original description where Cuba is not mentioned.

Seitz ignores the work of Godman and Salvin, places *tatila* as the Cuban subspecies and resurrects “*cærulea*” with a respelling for the continental subspecies, creating much confusion.

From the facts, the name *tatila* applies to a Central American butterfly as is shown by Herrich-Schäffer’s text and figures.

Specimens from Florida, Cuba and Jamaica and Hispaniola differ from Central American specimens in having the white spots of the forewing consistently smaller and in not having the discal

row of black spots on the underside of the hindwing finely pupiled with white. For these the name *tatilista* Kaye (1926: 473) seems available. There is no apparent basis for separating the Floridian or the several Antillean populations from each other for in any one area these butterflies show a great range of individual variation in any series of a dozen or more specimens which may be matched by like variation from another place.

Dr. Avinoff has examined the specimens in the Carnegie Museum collection and advises: ". . . the race *tatilista* of Jamaica is identical with the specimens of Florida . . . *tatilista* has not been found in recent years on Jamaica. Our very few specimens came from a collection made about half a century ago." Kaye's type came from Raetown, Jamaica, June 30, 1898 (C. B. Taylor). Dr. Avinoff says further: "The Central American specimens we have from Honduras, Guatemala and other localities are the true *tatila* with the white pupils on the reverse."

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